

August 1992

# approach

The Naval Aviation Safety Review

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Issue





Sadly, more than 30 years ago, such conversations were quite common. When I first entered naval aviation, we accepted that mishaps would happen, that we'd lose people and planes, and that there was little we could do about it.

Fortunately, we've gotten a lot smarter and no longer accept aircraft mishaps as part of doing business today. We have made major changes in all Navy safety programs, especially in flight training.

The mishap rate in the early 1960s was six times what it is today. The current rate, frequently less than three per 100,000 hours, was once thought impossible to achieve. Fleet replacement squadrons, technology, NATOPS, squadron safety programs, and changes in how we teach new aviators have all contributed to saving lives and resources.

We've acquired several improved training aids in recent years. The helicopter landing

"Did you hear that we have another aircraft off the end of the runway?"

"No. Is the driver OK?"

"Yep, but there's one less airplane in the inventory."

trainer (HLT) is a small, mobile deck in Pensacola Bay. Economical and realistic, the HLT provides shipboard landing training that is far superior to the training we accomplished using runways or taxiways with painted deck markings.

Last year, USS *Forrestal* (AVT-59) replaced USS *Lexington* (AVT-16). The larger deck will definitely add a safety margin to one of the most dangerous phases of flight training.

We also recently completed revamping the NFO curriculum. Feedback from fleet squadrons and FRSs often described new NFOs as lacking "air sense" with marginal crew-coordination skills. We decided to eliminate expensive training in the TA-4J and use cheaper T-2s and T-34Cs.

This move allowed many more flight hours and quality stick time, producing what we think is a far better product, the "Super FO."

With the introduction of the T-45 training system, we now have a top-quality, state-of-the-art visual flight simulator—a dramatic improvement over most of those we have used for many years. We can now demonstrate formation flying, bombing runs, or carrier landings (day or night). Although this technology has been in FRSs for several years, it is just now arriving in the training command.

Although we don't anticipate starting training for our first T-45 students until early 1993, we are already using the simulator to give

our strike students an early look at the ship. If we could measure the difference in stress levels during real CQs, I'm sure they would be lower for those student who have had experience in the T-45 trainer. LSOs tell me that they see a marked improvement in performance on the glideslope.

All the advanced technology and the progressive programs are tools to make training and flying safer, but it's our people who make it all work. We may not remember his name but few of us will ever forget our first instructor. Caustic and cantankerous when he had to be, he was also a skilled aviator whose attitude about flying influenced us in later years. He had to be more an educator than an evaluator always taking a personal interest in our development as aviators.

For those of you who are considering orders to the training command for your first shore tour, I want to assure you that there is no better place to be. You will find all of the positive things you remember from your first sea-duty tour without the long separations. The flying is fun, challenging and interesting. You will find that your fellow flight instructors were the front runners in the fleet.

Most importantly, the day your first student pins his wings on, his smile and the sense of accomplishment will be a reward unlike any you have ever experienced.

RAdm. William R. McGowen  
Chief of Naval Air Training

# approach

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**On the cover:** An aircraft handler steers a TA-4J of VT-7 toward one of the catapults onboard USS *Forrestal* (AVT-59). Photo by PH1(AC) Scott M. Allen.

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# My First Pass

By Lt. C. J. Runyard



B. Herring



B. Herring

The LSO said we would never remember our first pass at the *Lexington* in our T-2. "It will just be a blur," he said. But what happened after my first carrier break is burned into my memory. What I initially tried to forget now rides with me on every pass.

It was hard for me to believe that with less than 200 flight hours, I was going to be allowed to test my skill at the back of the boat. It was a lifelong dream about to come true. Like every other student naval aviator, I was nervous and wondering if I had what it took. But what could go wrong? CQ detts occur every other month and



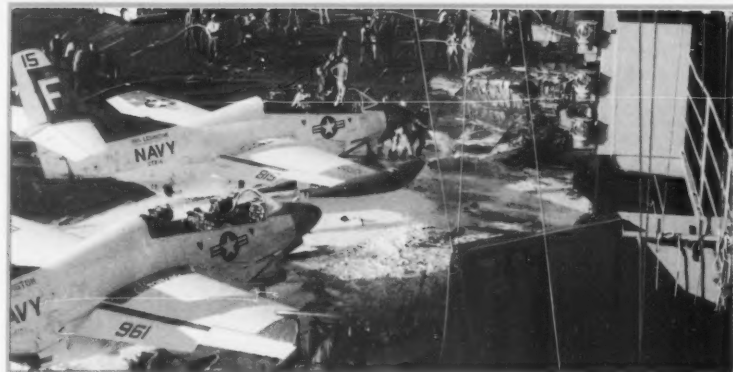
nothing serious ever happens.

To ease the tension, I was Dash 3 of a three-plane. The skipper was leading, and a good buddy of mine was Dash 2. Everything was going to be OK. The skipper had more than a few hours around the CV and Dash 2 was doing well above average in the program.

After a preflight "high-5" with Dash 2, I manned up and we were soon talking to marshall.

"Roger, your signal charlie," the controller called. Well, so much for orbiting overhead, or comfort time or whatever we were hoping to get. OK, get ready to go. Man, that boat looks small. Initial, nice form, smooth. Bet we look good for the break.

By the time I broke I was a few miles upwind. Plenty of time for landing checks. The lead must have done his touch-and-go while I was on downwind. Dash 2 looked a little long in the groove. I turned in at the 180 and as I came through the 90 my



concentration was broken by a chorus of screams. "Power! Power! Wave it off! Wave it off!"

Silence followed as I watched my friends' plane. After rolling into the groove, he had become fatally underpowered and stalled. He rolled inverted and slammed into the island.

Now what was I supposed to do? It didn't take Einstein or an LSO to tell me: burning ship, wave it off. Still in shock I took it around and climbed right through the break

altitude.

The trip back to Pensacola was the longest 15-minute flight I've ever had. Initially, the entire marshall stack plus the aircraft in the pattern were diverted. After a few intense minutes of mid-air avoidance, join-ups, and figuring out how to stop that ELT from blocking out the radios, I had joined up on the Ops O's wing. I performed a heinous clara-all-the-way bolter at the field.

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Safe on deck, I realized later that I was one of the few people who knew the finality of what had happened. The people orbiting in the marshall stack and the ground crews back at the field were all joking around until I told them what I had seen.

The day I left VT-2 at Whiting Field an instructor told me, "Never accept a low ball." Good point. I don't know what caused my friend's stall and departure. Whatever the cause, low and slow is not an acceptable approach to carrier landings. Why didn't he eject? Actually, he did, but he was inverted when his seat cleared the aircraft.

Climbing through 800 feet on the waveoff, I could have caused a second mishap that day. Don't let the unexpected shut your brain down. ◀

Lt. Runyard is an A-6 pilot with VA-145.



I was on the CNATRA CQ Detachment in Key West. The det was doing well aboard USS *Saratoga* (CV-60). I felt prepared. The brief, preflight, start-up, takeoff and join-up on the lead safe went smoothly. I was Dash 2 in a flight of four. Transit to the ship was shorter than I expected; *Sara* was about 25 miles off the coast. We arrived overhead to loiter as the group in front of us finished and we waited for our Charlie. The lead safe brought us in to the break, I did two touch-and-go's and then trapped. So far everything was just like the instructor pilots and LSOs said it would be.

The sequence goes quickly for the T-2s. I was excited after my first trap and wondered if it could get any better. Then I had my first catapult shot. My buddies tried to explain the feeling but you really can't describe it until you've done it.

After my third trap, I taxied to the cat. I remembered there was a lot of steam and I had to wait a minute to see the director, who signalled me onto the catapult. The catapult officer put me into tension and gave the run-up signal. I advanced the throttles to military, grabbed the cat grip and looked at my instruments. Everything looked fine.

I checked my instruments once more, put my head back against the seat rest and saluted the catapult officer. As I crossed the bow, my No. 1 engine rolled back. The EGT, RPM and oil pressure gauges all rolled back. I remember thinking that the engine sound was just like the simulator.

The aircraft settled. I'm not sure how far. The Air Boss immediately called, "318, attitude!"



# CQ Engine Rollback

By 1stLt.  
Thomas J. Mackie,  
USMCR



Cheryl Dickens



I explained what had happened and we checked for FOD. We couldn't find any damage and the rollback could not be duplicated at high-power turn-up. The aircraft was flown on a functional check flight with no discrepancies noted and was flown to the ship numerous times during the remainder of the detachment. I got my last trap the following day without difficulty.

When we returned from detachment, the safety officer was anxious to talk to me. I found out that the Air Boss had said something about a puff of smoke or exhaust at the end of the catapult stroke. One of my classmates was aft of the jet

There was a lot of chatter on the radio, but I was in the aviate mode of "aviate, navigate, communicate." Talking was not high on my list. The airspeed was about 90 KIAS, with one-half flaps, gear down and a weight of 11,500 pounds. The rudders were shaking so hard I had a hard time keeping my feet on them.

As I settled, I thought about ejecting. I couldn't increase the aircraft attitude because my AOA was a green chevron with 19.5 units. The Boss hadn't called for me to eject, so I assume I hadn't settled too low.

I didn't eject because I felt I knew the exact attitude where I could fly in rudder-shaker without stalling. I remember my FAM-1 flight instructor trying to get me to feel how the plane settles. I flew in rudder-shaker, slowly building my airspeed and altitude. I didn't raise my landing gear because I was concerned that I wouldn't be steady enough on the stick and might settle a little more. Milking the stick, I climbed through 80 feet and accelerated to about 95 KIAS.

Then, the No. 1 engine spooled up to 75 percent and just as quickly, it rolled back to 58 percent. By this time I had 110 KIAS and 100 feet and raised my landing gear. Then the engine came back on line.

I answered the Boss and explained my No. 1 engine had rolled back and forth, but was OK now. He gave me a vector to Key West and directed the lead safe to join on me.

Back at the field, the troubleshooters met the airplane.

blast deflector and also saw the puff of smoke.

When the people in the AIMD Jet Shop heard the description, they theorized that the rollback was induced by enough steam condensing in the intake to act like water ingestion. The puff of smoke was probably a little carbon, which had built up inside the engine, breaking loose. This seems plausible, although impossible to prove. A very small amount of water in the element that senses compressor-discharge pressure would cause erratic engine performance and then evaporate, leaving nothing to be found during troubleshooting.

The safety officer called the Naval Safety Center for any steam-induced rollback incidents. There were nine similar engine rollbacks (or afterburner malfunctions) with no defect discovered. Only one of the summaries described finding minute amounts of moisture in the PS3 sensing trap. The minute amounts of water were probably found because the flight had been aborted. The evaporation of the moisture would hide the real cause of this engine problem.

I learned a lot during this CQ detachment. The flight-training curriculum is well set up. My flight instructors have been outstanding. The simulator training that I received proved to be a very valuable tool to have in my back pocket when confronted with a real emergency. Lastly, the safety officer isn't really a Nazi; he likes to coerce stories like this one more than to draft mishap reports.

1stLt. Mackie is an SNA with VT-26.

# We Almost

**I was going to suggest to my pilot that we take a different altitude for separation, but then hesitated.**



**I** briefed what was to be my last syllabus hop in the training command before receiving my wings. It was a 1 v 1 ACM hop with two TA-4s. I was in the lead as we flew to the whiskey area. I concentrated on completing every task flawlessly to finish my time in the training command with a perfect hop. We quickly completed our basic flight maneuvers and pushed Dash 2 out to combat spread to begin the engagements.

The first few engagements proceeded normally, and we claimed kills each time. Hearing the "knock it off" call after the fourth engagement, we tried to join up with Dash 2. In the process, we lost sight of each other. Several minutes passed without either of us getting a tally. My instructor called Dash 2 for his position. Dash 2 replied with his position, my pilot rogered the call and told him where we were. Dash 2 was at the southern end of the area heading north at 20K. We were at the northern limit of the area, on the same radial as Dash 2, heading south, also at 20K. I quickly realized we were set up for a midair collision. I was going to suggest to my pilot that we take a different altitude for separation, but then hesitated.

We were always told throughout our training that pilots can make mistakes and part of crew coordination is backing them up on the instruments. In reality, the universally understood and unspoken rule was that the instructors were always correct. I assumed the pilot knew what he was doing by maintaining our present altitude.

The two TA-4s continued closing on each other.

Occasionally, we made positions calls to let



each other know what the separation was. As the separation closed to less than 10 miles, I frantically looked for the tiny, red-and-white aircraft. Inside seven miles I picked out the tiny dot that was Dash 2. I told my instructor that I had a tally on Dash 2 slightly left of our nose and altitude. My pilot didn't see him, so I began a running commentary of Dash 2's position, trying to talk my pilot's eyes onto the other aircraft. We were

# Dashed Dash 2

By Lt. Craig Stapleton

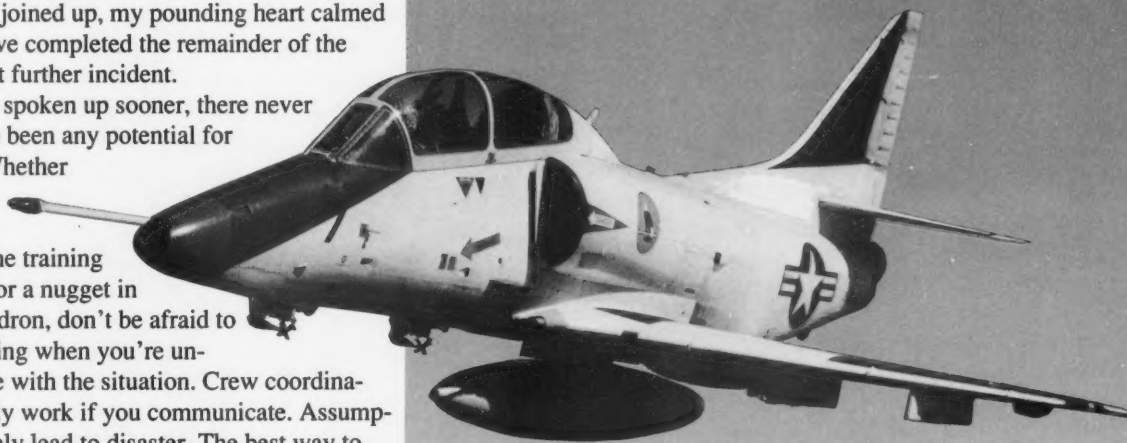
rapidly closing, and neither pilot saw the other.

Finally, to avoid a midair, I called, "Break right." The pilot rolled to the left, which would have turned us directly nose on to the other aircraft. I quickly yelled, "No, break right!" The instructor immediately reversed his roll and executed a right breaking turn. What a few seconds earlier had been a tiny black dot on the canopy, now filled my entire field of view as the brightly painted trainer flashed by us with about 50-75 feet of separation.

Dash 2 joined up, my pounding heart calmed down and we completed the remainder of the hop without further incident.

If I had spoken up sooner, there never would have been any potential for a midair. Whether you're a fledgling aviator in the training command, or a nugget in a fleet squadron, don't be afraid to say something when you're uncomfortable with the situation. Crew coordination can only work if you communicate. Assumptions can only lead to disaster. The best way to learn is to ask questions. Drilling your jet into another aircraft doesn't leave any opportunities to learn from mistakes. ◀

Lt. Stapleton is an ECMO with VAQ-137.



# Air Medals for Instructors?

## Maybe That Isn't Such a Bad Idea.

By Lt. Dan Keohane

**My** first flight as an H-1 FRS Instructor started out as a good deal: one student, a night FAM followed by overwater SAR work and max GCAs. What could go wrong?

The brief went well. My first-tour RP knew his procedures cold and kept calling me "sir" (still in the training command mode, I guess). During the brief, we spent extra time discussing vertigo. I stressed a good scan, avoiding unbalanced flight, and crew coordination. Fess up and get help.



screwed up?" He assured me that he might be rusty from a week's layoff, but he felt fine. When I passed control to him he was smooth, oscillating effortlessly between 1,000 and 1,400 feet in slow, regular cycles.

Not wanting to hear about it from approach, I took the aircraft and quickly put us back at 1,200 feet MSL. Muttering something about flight violations, I passed the controls back to him.

This time he stayed on altitude. He decelerated from 90 to 80 knots for no apparent reason. However, he held his

altitude well and I wanted to be a nice instructor, so I remained silent. In the turn to base leg, he dropped another 10 knots. I tried to be more specific, but still low-key.

"You don't have the leans or anything, do you partner?"

"No, sir. No, sir," he quickly replied.

We switched to our final controller. Naturally, on a night like this, it's the junior (and least experienced) controllers who have duty. I don't recall getting the standard "trainee under qualified supervision" warning, but it was obvious from the rapid 10-15-degree heading changes assigned on final that my student wasn't the only one having a rough night.

He hit the glideslope and slowed down even more. The third time I asked, he admitted having the leans—"a little, maybe."

I sped up my calls. "Nose down easy, add about 10 percent torque.

Bad weather canceled the FAM work, but we could still do the rest: 500 BKN, 1000 OVC, with 5 miles visibility underneath. (I was a new guy, but a player.) Launch 'em!

"Nice job" I commented as I monitored my student's decent instrument takeoff. I then gave him vectors to comply with special VFR course rules. The crew chief and I laughed about how dark the white beaches looked.

Ten miles south and a smoke drop later, it looked even darker. I demonstrated a night, low-visibility raft deployment for my student. It begins with a windline SAR pattern flown at 200 feet AGL, a descent to 50 feet AGL, and a deceleration to 25 KIAS on final. The pilot at the controls maintains an instrument scan, the copilot and crew chief direct him in to drop a raft to the survivor.

My RP's scan was a bit slow, making his basic air work rough when it was his turn. On final for his second raft deployment, we kept losing sight

of the smoke. I couldn't tell if it was disappearing in the wave troughs or if we were going in-and-out of haze or rain.

The third trip around the pattern got a little more interesting. On short final, the student kept descending right through 50 feet.

"A little power there," I said. With a minor adrenaline dump I helped him pull collective and watched us bottom out at 35 feet. Enough was enough.

"Take a break and relax, I've got the controls." Climbing out, we picked up a squawk and a frequency for some PARS. I thought that some actual instrument time would give my student confidence and keep us away from the water. Four headings and a descent—what could go wrong?

We went into the goo about halfway up to the GCA downwind altitude of 1,200 feet. I asked my student "Do you feel OK?" This vague question implies "Are you suffering from vertigo or just fundamentally



C'mon now, 52 knots. We can't go any slower." (50 KIAS is minimum IFR airspeed for the Huey).

At this point I was concerned about my student's performance. I knew I could still handle the aircraft from here.

Without warning, the nose popped up 30 degrees and we quickly rolled to the right 40 degrees.

"You got it, sir. I've got the leons real bad!"

"Great," I thought. All I saw as I assumed the controls was 40 knots, 800 feet AGL on the radalt, and the VSI pegged down. Like any self-respecting helo bubba, I pulled an armpit full of collective, which took care of the sink rate. It also sent the ball out the left side of the turn-and-slip indicator and put some serious topspin on those little stones in my inner ear.

Now both of us had vertigo. My radical power-pull with no left pedal trim disoriented me so badly that I checked my student's attitude gyro. I was sure mine had died. Nope, they both read the same thing.

"Maybe they failed together," I thought. "Nah. Well maybe? No! Believe your instruments; level the wings. OK, but it feels like I'm sitting in a chair that's bolted halfway up a wall."

"Watch it!" my copilot yelled, interrupting my confusion.

"I've got it, I'm OK," I lied. Wow! How-did things go to pieces so quickly?

As if to add to the situation, the final controller chimed in, "103, too far right for safe approach. If runway not in sight, execute missed approach. Fly runway heading, maintain 800 feet until two miles past the TACAN, then

turn right heading 180. Climb and maintain 1,200. Stand by this frequency for approach. We've had reports of low-altitude windshear tonight, if you experienced any, say altitude and severity, over."

What did he say?

"Ah, stand by. We're working on a little bit of vertigo here," I told approach.

I took the aircraft  
and quickly put us  
back at 1,200 feet  
MSL. Muttering  
something about  
flight violations,  
I passed the con-  
trols back to him.

Then a new voice, came over the radio. The slow, deep, seasoned sound of someone that would help us. "103, fly heading 180. Climb to 1,200 feet. Tell me after that when you want to turn."

I could do that. "103's right to 180, passing 900 for 1,200."

It took us 15 minutes on that heading to sufficiently get our act together to turn back in for another

try. My RP was a champ; he provided a calm, timely backup scan, and the crewchief came up between us to watch the altimeter and VSI. I have to admit I climbed to 1,200 feet MSL via 1,800 and back down again, but we never went one foot below the assigned altitude. The runway lights sure looked sweet as we broke out around 300 feet AGL.

During a very complete debrief, the three of us figured out what should have been obvious. The RP had the leans of varying degrees right from takeoff, but didn't fess up until too late. I didn't recognize this early enough. More importantly, I pushed the hop and the student on an early-stage event in bad weather. It turned out that through a scheduling mix-up, he hadn't even had any BIs yet! Chain of events anyone?

Another debrief at the club with the MO (who was smart enough to cancel earlier that night) reinforced two ideas. One, your instructional "box", which is what you can teach and let a student get away with in an aircraft, is a whole lot smaller than your own personal "box", the limits to which you can fly that aircraft.

Two, there's a fine line between being a player and pushing to get the X, and being stupid.

Remember that *Approach* article from the pilot who claimed that instructors who finish a TRACOM tour without a flight violation or mishap deserve an Air Medal? I laughed when I first read it. I didn't realize that guy was serious!

Lt. Keohane was assigned to HC-16 as COMNAVAIRLANT Evaluator for the UH-1N. He recently transferred to USS *Peleliu* (LHA-5).

# I Was the Bear in the "Far Side" Cartoon

By Lt. James J. Delaney

**A**nother beautiful day with red eyes and blue skies onboard our carrier somewhere in the Gulf of Mexico.

With six students to wave, I have 12 touch-and-goes, 36 traps, assorted waveoffs plus a couple of bolters to go.





It's Case I, about 2,500 scattered and seven miles visibility. Deck's steady, 25 knots down the angle. The first overhead is on time, but they're not my guys. Looks like the peanut gallery is in order. First couple of studs look real good. They should; we trained them.

Student: "750, Skyhawk ball, 2.6, Sierra."

LSO: "Roger, ball. You're long in the groove."

A little low, flat start, with a drift left, fly through, high in the middle. He's a ball high. Not bad, but his lineup needs help, fast.

LSO: "Right for line up."

Good wing dip, but there's no black smoke out the back end.

LSO: "Power."

Nothing. He touches down in a whisper jet, five feet past the 4-wire. The radios explode with emphatic power calls. The aircraft rolls down the angle at idle and settles below the flight deck. Moments later, we watch the aircraft struggle out of ground

effect and climb to pattern altitude.

Air Boss: "750, when you touch down you've got to go to full power."

Student: "Roger, I hit that mechanical stop."

Air Boss: "Say that again! What's this about a mechanical stop?"

The silence on the radio is ominous.

CNATRA LSO: "750, What's this about a mechanical stop?"

Student: "The one in Lt. Delaney's brief".

The sound-powered phone rings immediately on the platform. All attention immediately focuses on yours truly. I'm feeling like the bear on the famous "Far Side" cartoon. You know, the one where one bear directs the hunter's gunsight on the other.

"I think I can explain," I begin cautiously. "He means the forward idle detent. There's a caution in NATOPS about it."

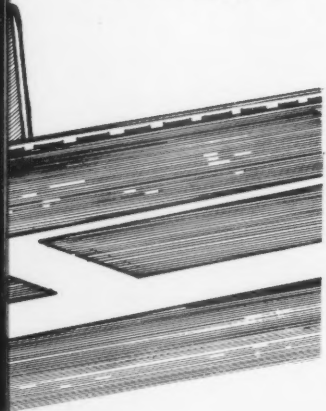
NATOPS says, "While advancing the throttle from idle toward

military power, any outward pressure may cause an inadvertent throttle hangup in the forward idle detent." Approximately 75 percent. Not exactly a great place to leave your power in an A-4 while landing onboard the boat!

The student had apparently pulled the throttle back to idle, then caused it to hang up at the forward idle detent when he tried to go to MIL. The old adages, "Take your bolter like a man" and "Never try to center a high ball in close to at-the-ramp", immediately come to mind. Never pull power to idle during over-energy situations in the groove.

When faced with the choice of landing power off or a possible bolter, the decision is clear: try to stop the motion of a rising ball at the ramp but never "ease gun" to land. We were lucky during this incident. The student realized the situation and the TA-4 responded well. The margin for error had been reduced to zero, but the dice rolled in our favor.

Lt. Delaney is an instructor with VT-7.



**The aircraft rolls  
down the angle at idle and  
settles below the  
flight deck.**



# NO

## NVGs Will NOT Give You Brighter

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**T**he A-6 crew was training with NVGs on a low-level mission at night near the Shenandoah Valley at 450 knots and 200 feet AGL. With a half moon and lots of twinkling stars, it was a perfect night to "rage on goggles". They nailed the first few checkpoints in the flatlands.

Approaching rolling hills with gradually rising terrain, the crew noted scattered clouds off in the distance at about the same time that the TC FAIL light illuminated, indicating that the search radar-terrain clearance system wasn't working. They decided to press on with just the NVGs since the goggles' performance had been awesome. Besides, this was an NVG training mission.

As he crossed perpendicular ridges, the pilot commented about scintillation (sparkling) in his goggles. The BN remarked that his NVG image also looked a little

strange but wasn't sure why. After cycling the power switch he discovered that the right NVG tube had failed. The crew discussed additional troubleshooting and their options. A nanosecond later, both crewmen saw a ridgeline fill their goggles. Instinctively, the pilot slammed the throttles forward and pulled the stick into his lap, lurching the Intruder into gentle buffet and just clearing the trees. After leveling off at 5,000 feet AGL and turning back toward homeplate, there was an eerie silence in the cockpit as both crewmen realized how close a brush with death they had. After a few moments, the BN said, "Man, that was close."

"We'll need to check the bottom of the airplane for leaves," his pilot replied.

NVG-related mishaps have received a lot of attention from the press. So far, the helo community (all services) has had more than 100 NVG-related mishaps while the fast movers have had none (knock on wood). TACAIR has been flying with NVGs since 1986 (VA-65, then in

# Teeth in Only Five Days!

By LCdr. John Snedeker

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CVW-13 in USS *Coral Sea* [CV-43]), and has continued to expand in the A-6E, F/A-18 and AV-8B communities. Zero NVG mishaps for TACAIR is impressive, but what explains the big disparity between the jets and the helos?

It's true that helicopter pilots have been flying with NVGs a lot longer (since the 1960s), and have experienced the growing pains of earlier NVG prototypes. They use the goggles in a very dynamic envelope called nap-of-the-earth (NOE), often in starlight conditions. But NOE and increased crew workload flying low to the ground at night can't be the only reasons; jets have been operating at 200 feet AGL and 450 knots plus in mountainous terrain at night and that's also demanding.

There is one other notable difference: the dual-sensor control. The majority of the helos involved in NVG mishaps were single-sensor flying machines (i.e., NVGs only). The Intruders, Hornets and Harriers all have other sensors to complement and compensate for the goggles. A-6 crews have been flying night low-levels through the mountains for decades using their Search Radar Terrain Clearance (SRTC) system, their bread-and-butter for

getting to the target. When we give the crew NVGs and train them, they can operate at lower altitudes and maneuver more aggressively than in conventional SRTC flight.

*At 200 feet, we had shot the gap between the twin peaks just like our day flight. It wasn't until I looked underneath my goggles that I realized how pitch-black it really was.*

During NVG missions, when the weather deteriorates, the crew can transition to the SRTC to make sure they clear obstacles.

*As we dropped into the valley wearing our goggles, we noted ground fog begin to obscure the ground lights. The clouds along the horizon began to blend into the distant ridgelines. As the SRTC-coded range bin began to rise, the pilot started his climb and we switched over to radar nav.*

The Hornets and Harriers have imagery from navigation FLIR on their HUDs that they use with NVGs, further illustrating the dual-sensor concept. Having two sensors in the cockpit that back each other up increases the safety margin.

One important point regarding the NVG-NAVFLIR

Proper training should show the enhancements and limitations of NVGs and emphasize the dual-sensor concept. NVG experience is measured not only in total hours but in exposure to various phenomena and operational environments that the goggles are used in, such as flatlands, mountains, deserts, and over-water. Training under the conditions (i.e. flying the same routes) can lead to overconfidence and the "King Kong Syndrome," where the pilot who is a marginal flyer on day VFR low-levels puts on NVGs and suddenly becomes a wild man down in the weeds at night.

*During a day FAM of the selected NVG training route, "Dutchman" was having trouble staying below 500 feet*

*AGL without jerking the nose up every once in a while as he sensed a rate-of-descent. Later that night, on the same route using NVGs, he was yanking and banking at 200 feet while commenting about how comfortable he was. "Isn't this the greatest?" he asked.*

*"Do you have that ridge on the nose?" asked the instructor.*

"Where?" asked Dutchman.

*"Climb!" yelled the instructor as they cleared a masked ridgeline that had blended in with another off in the distance. Later, in the debrief, they discussed the fact that you can't fly better at night than you can during the day just because you're wearing NVGs. They don't increase your skill or give you magic powers. And just for the record, NVGs do not turn night into day. You're flying around with a contraption strapped to your helmet that gives you a narrow field-of-view (like looking through soda straws) in shades of green. However, with proper training and under the right weather and lighting, NVGs allow you to bring your day VFR skills into the night arena.*

Keep NVG use in perspective. Consider them as just another sensor in the cockpit to use on your way to hammer the target.

LCdr. Snedeker is a BN and began flying with NVGs with Project Realnight at Patuxent River in 1986. He has more than 300 NVG hours including two deployments with VA-35. He is currently assigned to the AX Program Office in Washington, D.C.

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# How to Impress a Three-Star

By LCdr. Russ Penniman

As we walked to our TA-4 Skyhawks that fall afternoon, I was already looking forward to the weekend ahead. When the opportunity arose to be the spare aircraft on a VIP ferry flight, which happened to end up in the vicinity of my hometown, I jumped at the chance.

The first leg of the flight went as planned. My job as wingman was to join up, shut up and fly wing until we arrived at our refueling point, about half way to our final destination. If the lead aircraft were to break down somewhere along the way, the VIP would transfer to my aircraft.

En route to the refueling stop I had some comm/nav problems. The reception for the radio and TACAN was somewhat limited, and increasing the distance from the transmitting station made things worse.

After landing at the refueling point, the VIP cleared me to detach and head back to my home field, as it appeared that my services were no longer required. However, having other plans for the weekend, I politely insisted on seeing the VIP through to his destination.

We checked the weather ahead, which looked OK. The ceilings in the vicinity of our destination and alternate were forecast to be about 1,000 feet with a chance of rainshowers.

With our flight planning complete, we took off as a section. The takeoff and climbout went normally with one significant problem: as we reached cruising altitude, I couldn't receive the controlling agencies or any of the en route TACANs. Fortunately, I was able to hear the transmissions from the lead aircraft and I obediently followed him through the different frequencies along the way.

Midway through the flight, I tuned in one of the TACANs. A little quick arithmetic showed that I was fat on gas and we were well ahead of schedule. However, there was an anomaly with the information displayed on the TACAN. While the needle was pointing toward the tail of the aircraft, the distance from the station was decreasing.

A quick retune of the station corrected the problem and the needle pointed straight ahead. I had never heard of a 180-degree lockout. Quickly recalculating my fuel—taking into account the increased distance—left a lump in my throat; fuel was going to become a problem at our present rate of consumption.

We had been flying at a high-power setting to achieve our best ground speed, and had sacrificed fuel in the process. The lead, having an extra drop tank, and being unaware of the extent of my nav/comm problems, could not appreciate my growing concern over our rapid consumption rate. Dreading the ramifications of revealing the hole, which I had dug for myself to my lead and the VIP, I asked him to pull a couple of percent. Both aircraft slowed slightly at the new power setting and I recalculated my fuel. Not good enough. I called again requesting a more significant power reduction. The lead then selected a power setting optimizing range over speed. The fuel figures looked a little better.

Darkness had closed around us as we began our descent toward the cloud deck over our destination. During the descent, I heard the lead request individual precision approaches for our two aircraft. The time for true confessions had arrived. I reported to the lead that I could hear him but not the controller and that I wanted to make the approach on his wing. By the way, did he happen to get the current weather? (I did not reveal the fact that my primary navaid was also inop, not wanting to let the cat completely out of the bag.)

A tight knot began to grow in my stomach as the lead gave me the weather. Both the primary and alternate fields were 500 variable, 300 overcast and one-half mile visibility in heavy rain.

The approach was as uneventful as a night, NORDO section approach in thick IFR weather and rainshowers can be. The landing was another first for me. It was my first opportunity to stop a hydroplaning Skyhawk.

As I approached the Air Force's long-field version of overrun gear, I tried to visualize just how that funny little 12-inch barricade was going to stop my aircraft. Fortunately, I stopped before the gear and followed my lead to the Navy side.

After we shut down, I walked over to the lead's aircraft grimly waiting for the grilling which would surely follow but, surprisingly, the VIP commended me for hanging on during the approach. Had the crew in the lead aircraft known the extent of my transgressions against good common air sense, or the fact they were done in the name of "gethomeitis," I am sure I would not have gotten off as easily, especially since our three-star VIP's signature appeared on the cover letter of every NATOPS manual in circulation at the time.

LCdr. Penniman flies F-14s with VF-114. The flight in this story occurred when he was a SERGRAD flight instructor with VT-24.



The first thing out is, "Who is the presentation group..."

Half-life of Styrofoam

Only 74 hours to a checkmate. What a Rush!



Avid chess players

A 4-letter word for

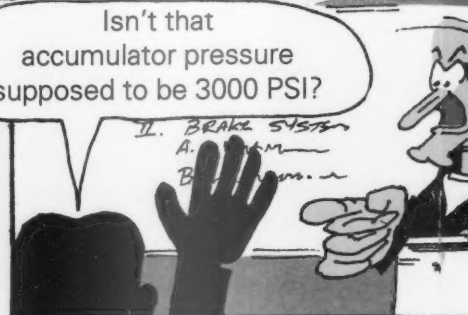


People who are good at crossword puzzles

A famous writer once said, "He who sits on the podium captures all." Enjoy the power of knowledge... bathe in your knowledge...

Isn't that accumulator pressure supposed to be 3000 PSI?

II. BRAKE SYSTEM  
A. ...  
B. ...

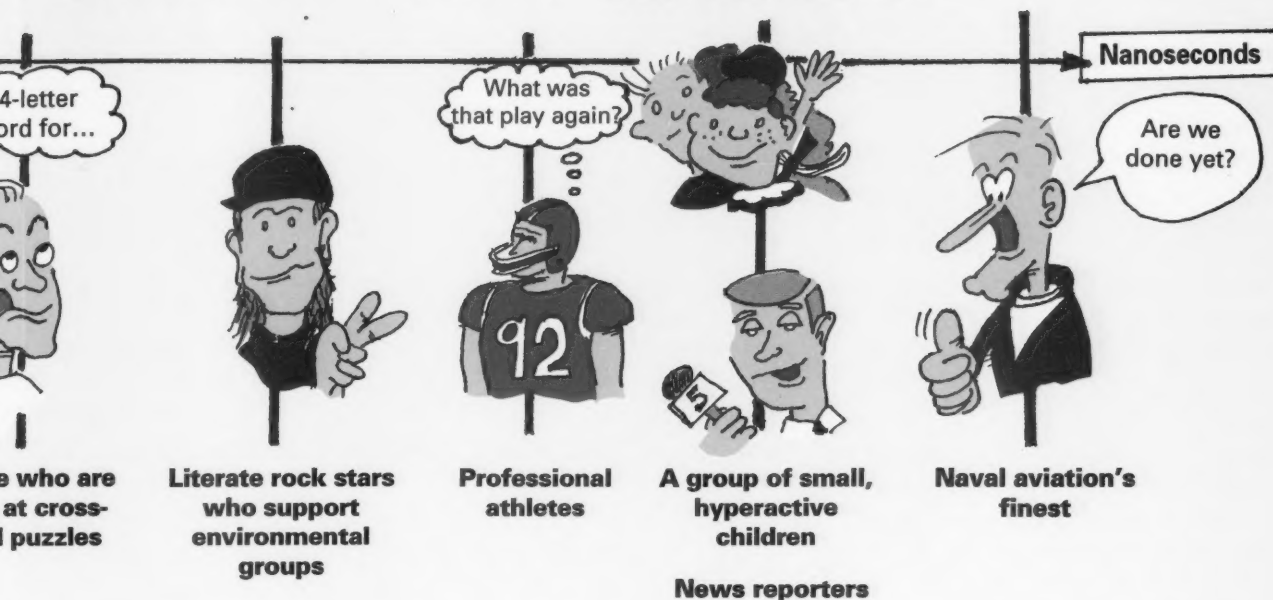


**BROWNSHOES**  
**IN**  
**ACTION COMIX**

"The kind real aviators like"  
By Lt. Ward Carroll, VF-143

...ing any speaker must figure  
 who am I talking to?" and slant  
 attention toward that particular

# ATTENTION SPAN TIMELINE



who dominates the  
 power as the listeners

That's enough out of you, wise guy!

OPS O,  
 SORRY ABOUT  
 THE COFFEE RING

→ FIREP BULLETS

- Came to work on time the bulk of the grading period
- Stayed most of the work day the balance of the grading period
- Did that lecture that one time
- Didn't crash any jets during the grading period

V/R,  
 Dangerboy

And don't forget, a lecture always looks good on your permanent record!

By LtCol. Marshall W. Lefavor, USMCR

Over the years I have seen safety officers use *Approach* articles that pertain to a specific community or to safety in general as a basis for a class. I have seldom seen as much interest and lively discussion generated in an AOM or safety brief as the twin articles on inverted flight in the March '92 issue of *Approach*.

We're a reserve aviation-staff group with a mixed bag of people who still fly. We have helo pilots, C-130 drivers, aerial observers, NFOs, former Phantom jocks and even a crusty relic still hanging around from the F-8 era. They represent a cumulative flying experience of a shade over 30,000 flight hours.

Both articles dealt with experiences in the dreaded inverted flight regime. In one, the individual admitted he had scared himself enough to realize he had nearly struck both himself and the aircraft. In the other story, an editor recapped a similar incident, but one that resulted in a mishap report describing an unfortunate SNA's excursion into the realm, resulting in a severely stressed aircraft and his own subsequent departure from flight training.

The comments in our AOM regarding inverted flight were pungent and often couched in terms unsuitable for an official military publication. But the sanitized version might be a worthy contribution. The general consensus was that perhaps another long and soul-searching look might be in order for prohibition of inverted flight as part of the training syllabus. The salty dinosaur with the F-8 logbook even offered to find the hapless former-SNA who was sent off for his transgression and make him "the best damned fighter pilot in the free world."

Our discussion covered every aspect from the logic and semantics of the manual to the value of demonstrating a potentially dangerous maneuver as a confidence builder. The discussion often deteriorated into salty observations such as "Been there ... done that," and "I've got more time at the top of a loop, etc.," and ultimately into "true confessions." The bottom line was that inverted flight should be explored and explained.

The article, "When Panic Sets In", tells us that inverted flight "is not specifically listed as prohibited." Yet, nearly every authorized

# "Inverted



LYONNE DAWSON  
1992



# Flight," the Movie



maneuver involves some excursion into the inverted attitude. This prompted the question, "What about the demonstrated maneuvers?" How ridiculous it would be for an instructor to tell a student, "I'm now going to demonstrate a loop, but I want you to close your eyes when we go over the top."

I don't want you to recognize that the aircraft is inverted."

Ditto for the aileron roll and barrel roll.

Nearly everyone in the room had experienced a similar incident in the training command that got them into a hairy situation during solo acrobatics. A helo pilot described almost the same circumstances, with the exception that he got there from an "authorized" loop.

"It kinda hung up over the top," he recalled. "I got instantly disoriented and didn't know whether to push, pull, stomp rudder, or just let go and holler 'help'. The next thing I recognized was that I was nose-low inverted, screaming downhill under all the G the maneuver could produce. I was actually heading back into another loop when I finally relaxed back pressure."

Another old salt echoed the same song. "I did the same thing this poor kid was guilty of," he confessed. "I remember pulling that stick back until I blacked out. A little voice in my head told me things would either get light again, or stay black forever. The difference was that I lied. I bent it up pretty good, so I told the instructor I got disoriented at the top of a loop. Right in the middle of that experience, I found myself wishing there had been someone to teach me about life in the upside-down mode."

The Crusader driver (who had undoubtedly seen it all) described his experience while under instruction in inverted flight.

"I thought everybody did it. I had one instructor who used to park the thing belly-up and say, 'You've got it!' I had another one who rolled it over and made me look at the oil gauge. After what seemed like all day hanging in the straps, he snapped it back upright and said, 'See, they always build in a little extra. They tell you 15 seconds, but we went for 20 and the needle didn't even start to move, did it?'"

A former Phantom RIO spoke up. No one wanted to hurt his feelings. Besides, anyone who flew Phantoms deserved to be heard.

"My pilot would fly acrobatics on the gauges when we were returning from a night TPQ [radar] bombing hops near the DMZ in Vietnam. He was so bored he would just roll it over and contemplate the Zen of the instruments for a while. Then he would haul the stick back and take us into a screaming, high-G split-S—in the blackest part of the night—just to get his juices flowing. I always hoped we'd eventually tie up with a MiG. Not for the glory of aerial combat, you understand, but just to give him an excuse for flying that way."

The resident A-6 guru commented that a many bomb-delivery techniques, even in the A-4 days, required operating the aircraft in inverted flight.

"On that basis alone," he told the group, "there should be a place for instruction in inverted flight in the earliest phases." A helo driver said, "I remember when somebody decided that a CH-53 could do a loop, so they tried it. Some brave dudes pulled that big hog right over the top. It wasn't me. I remembered what I learned in rotory-wing flight theory: the vertical component of lift was 90 degrees perpendicular to the rotor blade plane. What that meant to

me was that if I went inverted, the lift vector was straight down. No thanks."

The admin officer, a non-aviator, offered an interesting viewpoint. He had been preparing the command chronology and had reviewed the history of Marine Corps aviation. It seems that the Marines' fourth aviator, First Lieutenant Francis T. Evans (call sign: "Cocky") had decided that he could loop the Curtiss N-9 seaplane. It didn't matter that no one had ever done it and that everyone told him that it couldn't be done.

On February 13, 1917, he flew out over Pensacola Bay, hauled back on the wheel at 3,500 feet, and started his loop. As predicted, he promptly entered the stall-spin regime. Fighting panic, he moved the controls until the aircraft flew out of it. Undaunted, he tried it again, each time entering and recovering from the resulting spin. Finally, the ungainly crate was beaten into submission by Marine Corps will-power and allowed itself to be flown through a loop.

Satisfied that he was making aviation history, he duplicated the feat over the base to be certain he had witnesses! His spin-recovery techniques were soon incorporated into the training syllabus and he eventually received the Distinguished Flying Cross.

This bit of information prompted our F-8 warrior to offer his last bit of philosophical comment. "It just goes to show," he mused, "that what makes you a hero in one ball park makes you a goat in another." ◀

LiCol. Lefavor is a RIO, and the XO of Mobilization Training Unit NC-05, the augmentation unit for the 2D MAW, at MCAS Cherry Point.

# BRAVO ZULU

Lt. Scott Bibeau  
Lt. Jeff Whelan  
Ltjg. Scott Mulvania  
AT1 Gregory Krips  
CT11 Timothy Brandes  
CT12 Mitchell Murphy  
VQ-2

On what proved to be the last operational flight of the Navy's EA-3B, Ranger 04 launched on an electronic-reconnaissance mission. Three hours into the flight, the aircrew experienced explosive decompression after the starboard side window shattered.

Ltjg. Mulvania (pilot) began an emergency descent from 37,000 feet toward NAS Sigonella.

The force of the decompression and resulting air turbulence wrenched Lt. Whelan's (navigator) helmet and oxygen mask off. AT1 Brandes realized that Lt. Whelan was losing consciousness and shared his oxygen with the navigator. Once revived, Lt. Whelan used the remaining pieces of his oxygen hose for breathing.

Unable to communicate with the pilot on ICS, Lt. Whelan coordinated NATOPS procedures with hand sig-

nals. The other crewmen, led by Lt. Bibeau (Senior Evaluator), donned their oxygen masks and checked for damage in the crew compartment, while securing equipment before landing.

Nearing Sigonella, Ltjg. Mulvania slowed the aircraft. Lt. Whelan noticed that the starboard slat had not extended. He communicated the PCL procedures for the new emergency to the pilot who started preparing for a short-field arrestment.

On short final, with the aircraft's flaps and gear down, Lt. Whelan saw that the binding starboard slat had fully extended. Ltjg. Mulvania quickly saw that his airspeed was too high for an arrested landing and chose to make a normal landing using the drag chute.

Examination of the starboard side window showed excessive delamination of the external fiberglass retainer. Similar defects were found in all squadron EA-3Bs and several new windows in the supply system.



Left to right: Capt. Ken Loy, Capt. Lance Maffett

Capt. Lance Maffett  
Capt. Ken Loy  
HMT-303

The Cobra was straight and level at 1,000 feet during a PMCF, when the fuel-pressure caution light illuminated. Within seconds, the No.1 engine flamed out.

Capt. Maffett and Capt. Loy set up for a single-engine approach to a beach LZ, anticipating that the second engine might flame out, too.

Capt. Maffett made a precautionary landing, while Capt. Loy made an emergency call.

A postflight inspection revealed large quantities of self-sealing fuel-cell gel in the fuel filters of both engines. This contamination induced fuel-pump cavitation, which made the No. 1 engine flame out. It could also have made the No. 2 engine quit.



**A**fter three years as a BN instructor, I felt like I had seen it all. In that time I had saved my life on a night low-level with a "climb" call when I couldn't wait any longer for the pilot to interpret the approaching terrain. I had seen the back of the ship at night, at angles and attitudes that just weren't meant to be. But, the event I grew to dread the most was a student's first night tanking hop.

22 Riding in the right seat during the initial qualification hop can be tense. If you think flying 50 feet behind another airplane on a dark night, aiming at a big piece of FOD (the basket), and adding a handful of power is easy, I've got the job for you.

A few years ago, a KA-6D tanker lost its starboard horizontal stabilizer and a good portion of the vertical stabilizer after being hit by the would-be tankee. Also, the baskets routinely take the shape of a pretzel after 30 minutes of sword fighting with the aircraft probe, making tanking even more difficult.

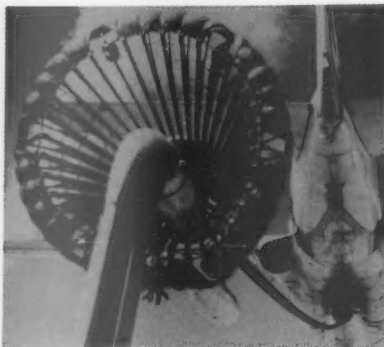
The day had come for my last tanking hop in the FRS. Day tanking is always a good indicator of how the night will go. Ten minutes at the stick, getting the sight picture, is worth 100 briefs. My pilot looked like a natural. After a few miscues, he was getting the hang of it. He was smooth and predictable. I was relieved; except for a moonless night, it was looking like an easy hop.

The standard sortie during this phase of training is to combine night divebombing and night tanking in the same flight. Obviously, this scheduling originated as a cruel, onetime practical joke that was permanently adopted by somebody with no sense of humor. I'm sure it saves TAD funds.

We were scheduled to drop 12 practice bombs in the 30-degree dive pattern. My pilot and I took off, flew the short distance to the target and threw ourselves at the ground 15 times. After the last bomb was off, I safed the ACU, and we headed for the tanker. It was conveniently orbiting over the Salton Sea. The tanker was easy to spot with the lights of lead safe and another aircraft in the formation shining brightly.

After rendezvous, we had a few minutes to relax and watch the aircraft ahead of us finish tanking.

"He looks rough," I thought.



"I'm glad I'm not in that plane."

When we finally got our turn behind the basket, my pilot got off to a good start and plugged on the first approach.

"Great job," I said. "One down, five to go."

After a couple more close misses, we tapped the side of the basket and a very unpredictable oscillation pattern developed. Occasionally, baskets will sway back and forth, but I had never seen one move like this. It twitched randomly left and right, moving about four feet with each excursion. We asked the lead safe to look at it as we cleared to the left. He couldn't "fix" it with his probe but cleared us in to try to qual.

I asked for the buddy-store package, but it wouldn't extend. It was either use this basket or don't get qualified until an unspecified future date.

The pressure for an "X" can mold your decision-making. Feeling conservative, I suggested we try a couple more approaches to the basket using the same good techniques and steady closure that had worked earlier. If the basket was too erratic, we would take our miss like men and back out. If we didn't have any luck after a couple tries, we would RTB.

The basket wouldn't allow a couple of tries. On our first approach



# Duck!

By Lt. Gary Peterson



we had too much closure and missed the basket low and right. As I started to say, "Back straight out," an explosion sent me ducking for cover. How far can you duck in an A-6? When I looked up, I realized that the explosion was caused by rapid decompression with the loss of the left side of our canopy. It was windy, but as I looked around, I couldn't determine how much canopy remained.

Barely able to communicate because of the noise, I declared an emergency and we headed for El Centro 40 miles away. We had been tanking at 15,000 feet MSL. Separating from the tanker, we descended rapidly as the pilot turned to the proper heading. Before landing we needed to do a damaged-aircraft, slow-speed check at 10,000 feet AGL.

We climbed back to altitude, while I briefed the pilot that if we

had any controllability problems, ejection might not be an alternative because his seat might be damaged. As it turned out, there was no damage to the flight-control surfaces, the slow speed check was normal, and we made it home.

The canopy's left side was completely gone, a fuselage panel was punctured, and the pilot's seat had sustained some damage. It is likely that an ejection would have been successful because of the protective cover over the upper portion of the Martin-Baker seat. The cover was mangled beyond repair but had done its job. The pilot also complained of a bruised shoulder he received when the basket came crashing through the canopy.

Don't tank, except as a last resort, from a basket that is oscillating more than the standard 1-2 feet.


It's easy to talk yourself into one or two tries. We were probably lucky we didn't get a plug because we may have ripped the probe off the airplane.

When you lose the canopy, safe the upper ejection-seat handles. It's a common-sense precaution to avoid accidental deployment of the face curtain.

You can't duck as fast as you think. When I took off my flight gear, I found a four-inch piece of glass. The only way it could have got there was before I ducked.

Will I duck next time? Try to stop me! As it turned out, that wasn't my last tanking hop in the FRS. We went out the next night and my pilot knocked it out like an old pro. (The tanking, that is.)

Lt. Peterson flies with VA-52.



# Behind the

8

# Ball

By LCdr. J.M. Grado

**H**ow far do you let a student go before you take control? I guess it's some time before a mishap occurs and after you obtain a learning or training objective. After my experience, I think I know how far is too far.

I was making my second or third FAM-4 of the day. I noticed that for this hop, I was to introduce in-flight emergencies. I had a few tricks up my sleeve that I thought would work pretty well. During the brief, we covered uncommanded control inputs and a couple of hydraulic-system failures.

The controls in the T-2C are hydraulically boosted; the procedures for hydraulic failures or uncommanded control inputs require the pilot to turn off hydraulic boost and continue the flight. The kicker is that although these procedures are briefed for FAM-4, boost-off flight is not introduced until FAM-5. I had not intended for my student to do any boost-off flight on this hop.

We covered all required brief items and discussed simulated emergencies, but I did not clearly tell the student not to move any switches until I told him to do it (important safety tip).

We launched and the student was doing pretty well, so it came time to simulate some emergencies. One of my favorites was to give the student a simulated split-flap condition as he cleaned up from dirty stalls. A fairly benign maneuver (I thought). I would just bring the stick over as he went from full flaps to half, and have him try to figure out why the aircraft wanted to roll.

It usually took some prompting, but students eventually figured it out. This guy didn't catch on; he raised the flaps to full up. I thought, "I will fix him." I rolled the aircraft over to about 70 degrees, right wing down. He said he thought it was runaway trim.

"No," I said, "try something else."

The next thing I see is the hydraulic-boost off-light come on. "No problem," I told him. "Continue in boost-off flight, level the wings and maintain 200 knots or less."

No response. The aircraft accelerated through 230 knots as I pulled off some power. Next thing I know we are continuing to roll and end up 60-70 degrees nose down and inverted. We were at about 11,000 feet AGL. I tried to talk him back into controlled flight but it was too late. I took the controls and tried to recover.

Power to idle, boards out, airspeed up around 300 knots and on a beeline for a chunk of south Texas dirt. As we quickly passed through 7,000 feet AGL a little

warning light went off in my head, something about "passing 7,000 feet in out-of-control flight—eject." I wrenched a muscle in my back trying to get that aircraft upright and pointed toward the sky.

It is surprising the number of things you can think about in a situation like this, not all necessarily bad. I remember thinking "This is ridiculous. Here I am the safety officer and I am going to plant this thing right next to that little red barn." Then, I thought, "We should have gotten out by now."

One good thought I had was, "As MP, at least I won't have to do all the mishap paperwork on this one."

As it turned out, after I screamed a few times over the ICS to turn the hydraulic boost on, the student responded and I leveled the aircraft at about 3,500 feet.

Embarrassed and with a strong sense of my own mortality, we completed the hop and returned to base. I told some of my friends back at the squadron and even got up enough nerve to relate my experience at an AOM. Of course, the more seasoned IPs said all I had to do was hit the electrical disconnect and I would have had the boost back. Fine, now they tell me. I had never heard or given much thought to that, but the more I think about it, it might have made things worse. Losing total electrical power and not being able to talk to a student with an itchy hand on the ejection handle might not have been the best course of action.

What do I do differently now? For one thing, I don't simulate that emergency anymore, even though it seemed benign—150 knots accelerating, 60-70 degrees angle of bank.

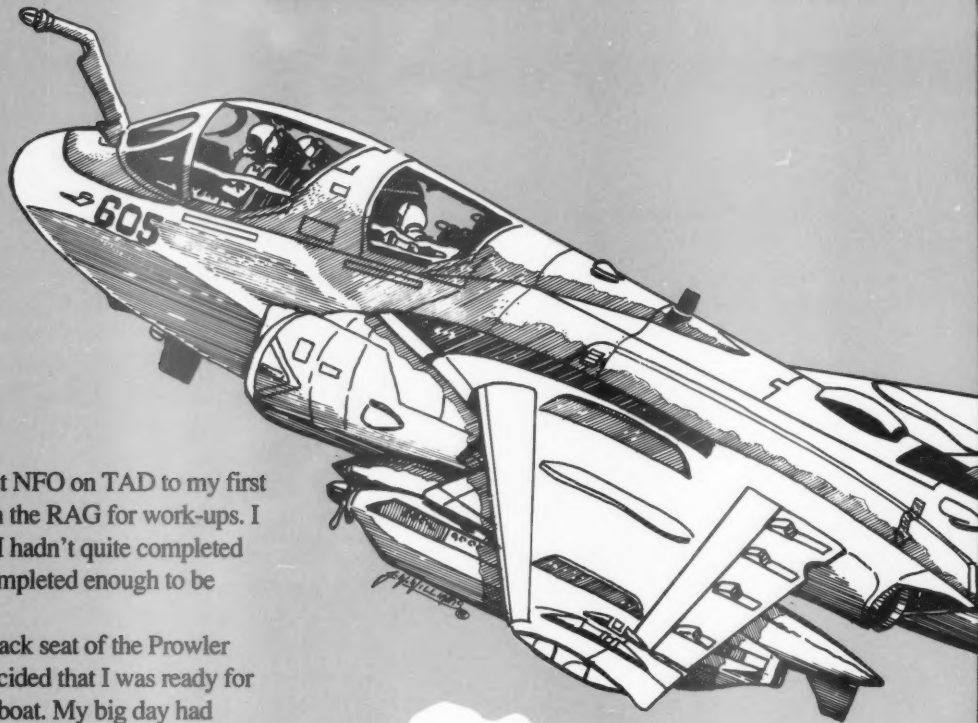
I also brief students that for any simulated emergency, I want them to recite their procedures first and then I will give them the go-ahead to move levers and switches. I also brief that once they identify the correct emergency, I will discontinue making the situation worse, i.e., for runaway trim, I will stop running it away.

I also try to remember that no matter how simple a scenario may seem, students can easily get overloaded and put both themselves and their instructor behind the eight ball.

There's a lot to be said for good crew coordination and knowing NATOPS inside and out. But how far is too far? NATOPS and squadron SOPs give you boundaries, but you should set your own personal limitations, within NATOPS and SOP, and be able to recognize when a student is exceeding them. They will try. ◀

LCdr. Grado is an instructor with VT-23.

# Too *Junior* to Be



26

**T**here I was, a nugget NFO on TAD to my first fleet squadron from the RAG for work-ups. I was TAD because I hadn't quite completed the FRS syllabus, but had completed enough to be considered "trustworthy".

After eight flights in the back seat of the Prowler during cyclic ops, the XO decided that I was ready for my first front seat hop at the boat. My big day had arrived. It was nothing hard—just a SSC mission off VACAPES, but I thought it was great. (Remember your first flight in the fleet—not just doing CQ?)

The hop had gone well and now it was time to head back to the overhead for a day Case I recovery. After following air wing procedures, we entered the stack and commenced our holding while waiting for a ready deck. It wasn't long before I noticed a section of F/A-18s heading our way as we proceeded from point 1 to point 2 of the overhead.

"No big deal," I thought since we share low holding with the Hornets. As they got closer I began to wonder about a couple of things.

Why were they entering the circle perpendicular to point 2? (Oh, they must be going to rendezvous with another section across the circle; after all, they are fleet guys.)

I wonder if they see us? (Come on, how could any fighter/attack/tanking plane not see a "Prowler-grape" in

the overhead; after all, they are fleet guys).

How are they going to get around us since we're on a decreasing range, constant-bearing line of flight? (Probably gonna do some of that Blue Angel stuff; after all, they are fleet guys).

Do the guys in the back seat see these Hornets? (They have to. The F/A-18s are getting pretty close.)

After thinking all of this, I finally decided to say something since I could now see the rivets on their planes and I was looking right down their beaks.

"Umm, there's a couple of fighter-attack guys over here heading right for us," I said in a hushed tone.

"Really? Where?" asked my pilot.

"Pull up," I said, "They're passing underneath us right now" My stomach had just completed a couple of somersaults as I wondered if this is how things were normally done at the boat.



# Scared?

Lt. Richard Fields

Fortunately, my pilot did pull up and looked for the traffic. That's when all hell broke loose.

"What the..! Those guys almost hit us! What are those guys doing? What are you doing? Why didn't you say they were ready to hit us?"

Oops, I guess I should've said something sooner (but I'm not a fleet guy...).

After settling down, we trapped aboard and caught up with the Hornet drivers who said that they never saw us

as they entered the circle. In our crew debrief, the backseaters said that they didn't see the F/A-18s until the pilot started yelling. The pilot said that he didn't see the Hornets because I was responsible for clearing the right side of the plane.

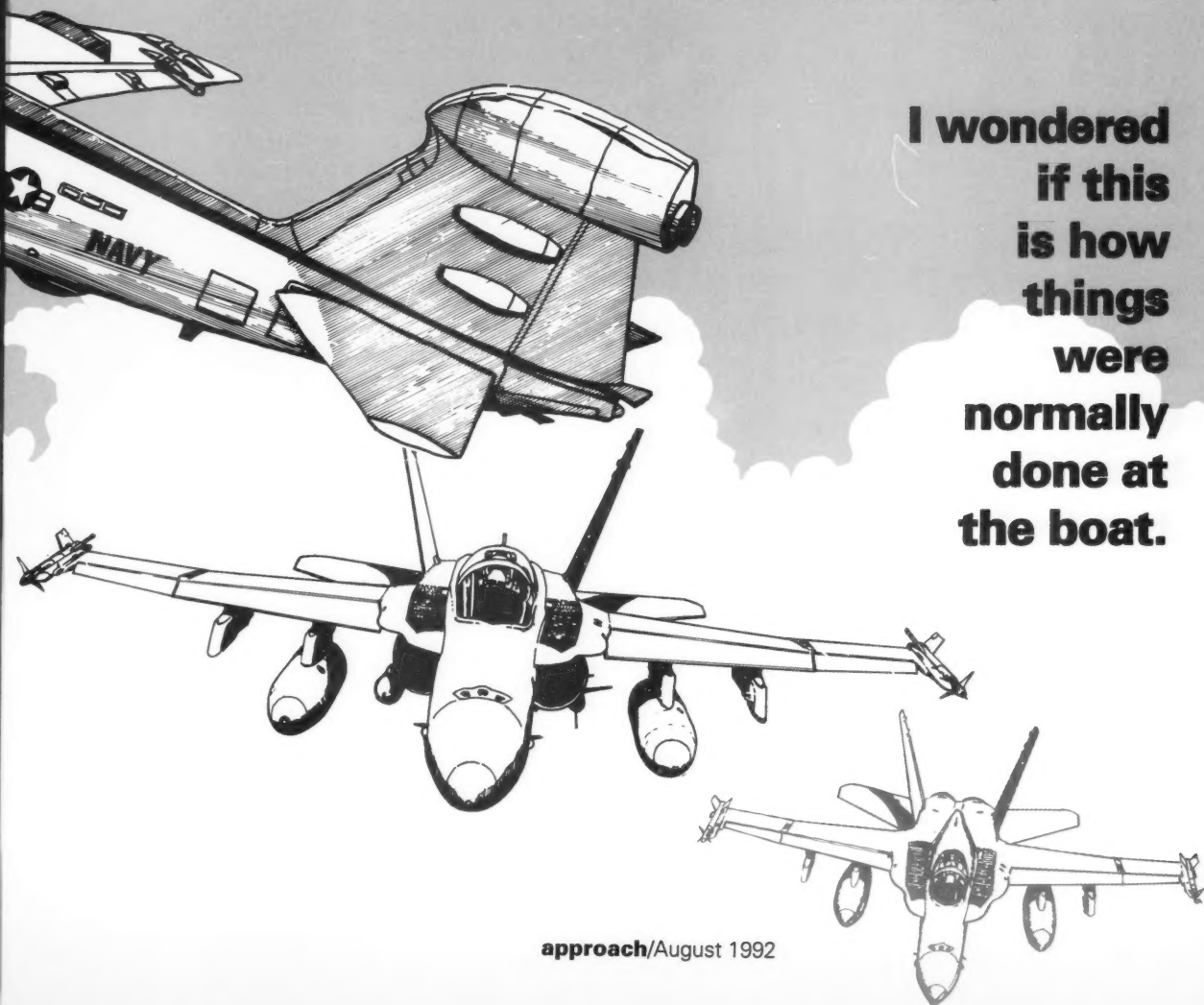
At that point I felt pretty stupid. Just because I was new to the boat and with an experienced crew, I assumed that they would take care of me. By not saying something sooner and not reflecting the gravity of the situation in my tone of voice, I almost morted myself, my crew, and several air wing bubbas all because I didn't think that I knew enough about what was going on to say anything.

If you have the wings, if you've made it to the fleet (even TAD from the RAG), chances are you've got the right tools to keep yourself alive. Don't blow it by underestimating yourself and assuming that the fleet guys always know what's going on.

Lt. Fields is a first-tour ECMO with VAQ-140.

**I wondered  
if this  
is how  
things  
were  
normally  
done at  
the boat.**

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# Riding the Fresnel Roller Coaster

By Lt. Dave Swathwood

**T**raining command LSOs face several important questions during a CQ. How many intrepid students will there be? What kind of "new things" will we see this time? And just when you think you have seen it all, something more colorful will appear.

After waving the basic set of FCLPs, my fellow LSO and I departed for Gitmo. We were hoping for a dream boat with no DQs (disqualifications). We arrived on board the carrier and assumed the position. Our group from NAS Key West was on their way.

The first 4-plane arrived and the "color" started right away. The lead safe called clara (low), followed by waveoffs for Dash 2 and Dash 3. We assumed things couldn't get any worse.

Later in the afternoon, things calmed down a little, and our last student headed into the break. As he came around for his two touch-and-go's, our intrepid SNA was chasing his lineup.

That in turn made him ride that Fresnel roller coaster.

After his initiation into carrier aviation, with a less-than-average pass, he was on deck. Time for the 30-word or 15-second (whichever occurs first) debrief. With a new chapter on the relationship between lineup, power, and glide slope in his book, he was off. I'm sure his first cat shot did wonders for his debrief retention.

We caught him, and launched him again. Through the 90, he came with sweaty palms and a little salt, thinking he knew where the wires were. The start was not bad but he was lined up right. He acknowledged a "come left"

from the backup LSO by dipping his left wing and settling. Now he was a little low and correcting toward centerline.

All my training and experience got me thinking. My mind was in the LSO-fortune-teller mode.

Where is he? A little low. What's coming next? A "right for line up" to stop



him on centerline. What's he going to do? Settle ... not! If he goes any lower he's outta here.

As the SNA came onto centerline, the backup LSO's "right for line up" call was followed by a wing dip and no power. I called, "Power...waveoff!" (You know the imperative tone the LSO sometimes uses?) Every hair on the back of my neck jumped up, like a pooppy-suited AOC when the drill instructor walks in. I realized that he wasn't going to clear the ramp with that rate of descent.

As the power came on, the rate of descent shallowed and he crossed the ramp. The Guppie leveled off at about eight inches hook-to-deck. I remember thinking, "Fly, fly!" but instead of the hook grabbing the wire, the wire seemed to grab the hook!

It was pitiful to see the poor T-2 trying to fly with 95,000 tons of ship hanging off its hook. The T-2 achieved about three feet before hitting the deck. A little nosewheel first but not enough to damage a mighty Buckeye. The next sound I heard was the phone on the platform. Yep, the Boss.

"Paddles, that was a late waveoff!" With a hearty, "Yes, sir," the backup LSO hung up and looked at me. "Did you think it was late?"

"Is he on the ramp?" I replied. "If he's heading for a close call at the ramp, a waveoff is the only answer. It's never too late".

"OK, Boss," I thought, "I'll try and wave him off earlier next time."

Later, in the ready room, I debriefed the student, who probably did not know how low, or where, the ball was. The experience must have made a lasting impression on this junior birdman. The next day, in the same jet (after the required maintenance inspections), he flew two of the best passes of his short carrier career. He put the centerline between his legs, and flew the ball all the way to touchdown. Yea, verily, words to live by. And as a last note to all those in the LSO brotherhood, if he's headin' for the ramp, whether for a hook slap or something more, use the lights.

Lt. Swathwood was an instructor with VT-26. He is currently assigned to VS-27.

Cheryl Dickens



The bird is gigantic. He seems to fill the whole windscreen I reach for the stick while I instinctively duck to the right.

# Weasel's Birdstrike

By Lt. Mark Neissel



30 **We** take off from NAS Meridian at approximately 1100. Weather is clear with visibility 7 to 10 miles. We enter VR-1030 at point A at 360 knots and 500 feet AGL. All is going according to plan. As we get closer to Montgomery, Alabama, we find clouds at 3,000 feet, broken to overcast, with visibility less than 7 miles. Suddenly, a large bird slides out of my blind spot (directly ahead of the aircraft) into the left part of the windscreen. The bird is gigantic. He seems to fill the whole windscreen. I reach for the stick while I instinctively duck to the right. I close my eyes for a split second, as I wait for impact. In this fraction of a moment there is a loud explosion in the cockpit followed by a very loud wind.

When I open my eyes, I see that the inside of the airplane is covered with blood, guts and feathers. The left half of the windscreen is caved in and the left forward-quarter panel of the canopy is almost gone.

The airplane is buffeting violently from the wind coming in the openings. The engine is rumbling. It sounds like a garbage disposal grinding up food. The engine starts to wind down. I think, "Oh, my God, I don't want to have to jump out of this thing. It's Saturday. I should be home watching the ball game or something."

I'm flying the plane, my hand is pulling back on the stick and the airplane climbs. The engine rpm starts to rise.

"Come on, baby," I plead. "Come on. Don't quit, you can do it." There are no secondary indications of engine problems. It's running well again. It's been maybe 5 to 10 seconds since we hit the bird.

What's my student doing? Is he all right? He's moving but slumped over to the right. I yell at him but I don't get any response. "God, it's loud in here!" I

scream.

I slow the airplane down, trying to get to 200 knots to ease the buffeting and noise. There's a broken layer of clouds at 3,000 feet. Should I go above it? I want more altitude if the engine quits. I keep climbing.

Seems like we've been up here forever. "Where is my divert from here? What is my divert?" I can't remember. "Where am I right now? Where is my chart? It's so loud!"

I start circling until I can dig out my divert chart. I'm glad I keep it under my knee board. The altimeter reaches 7,000 feet; that's high enough. The engine is still running smoothly. I find that at 200 knots the wind blast is worse. I increase speed back up to 250 knots.

The student moves his rear-view mirror so I can see him. He gives me a thumbs-up, but still no answer when I try to talk to him. His visor is half gone, and his face and helmet are covered with blood. Is it his or the bird's?

I try to read my chart in the wind. Montgomery, Donnelly Field, channel 58. I dial it in. Approach frequency 319.9. TACAN lock-on at 17 miles. I turn and go. Buffeting is bearable at 250 knots. I yell over the radio, "Montgomery Approach, Hawk 705".

"Hawk 705 stand by."

I don't want to stand by. "Montgomery Approach, Hawk 705 is declaring an emergency."

"Hawk 705, did you say you were declaring an emergency? We can barely hear you."

I can barely hear them. It is too loud in here. I try to signal the student with my hands to squawk 7700. He doesn't understand.

"Approach, Hawk 705 has had a birdstrike. I've lost half my canopy. I am diverting to Donnelly".



"705, roger. All aircraft stand by, emergency in progress. 705, fly heading 090. Donnelly Field runway 9 in use. Arresting gear rigged. Field on your nose, 10 miles. Squawk emergency."

"Approach, Hawk 705. Unable to squawk 7700. I have overcast layer below me. What are the bases?"

I realize I have to start descending. The engine is still running good. No secondaries.

"Hawk 705, Approach. Bases 3,000 feet. Field seven miles on your nose. Cleared to land. Report field in sight."

I have to start to dirty up. I slow to 200 knots. The gear comes down. Good, I have three down-and-locked. I'm holding flaps until I can see the field. Hook down. I'm in the goo at 4,500 feet. Am I forgetting anything? We're going to do a precautionary approach. We may have to modify the approach depending on our position to the field when we pop out of the clouds.

Approach calls, "Hawk 705. Field at your 12 o'clock, five miles."

I can't see the field yet! I am still in the goo. Passing 3,000 feet, I can see the ground. At 2,800 feet we pop out. Good. There is the field on the nose 3.5 miles. I can barely see the runway. I can't see out of the left side because the windscreen is smashed. I can't see out of the right side because blood is all over the windscreen and canopy. I complete the landing checks.

"Approach, Hawk 705 has field in sight."

I slip the airplane a little and try to look out the hole in the canopy. The airplane buffets a little more and it is windier in the cockpit, but it works. I have got to play with the power a little and approach slower than 180-200 knots. The buffeting seems to be worse at those airspeeds. One hundred and sixty knots works well. I make the runway, straighten out the plane, and touch down. We roll

into the mid-field gear and shut down.

The Alabama Air Guard does a terrific job handling the situation. An ambulance is waiting for us and they do a great job getting the student out of the cockpit and to the hospital. The bird hit him square in the face and chest, shattering his visor and breaking his oxygen mask. His lip is badly cut, requiring stitches. He has cuts and scratches on his right arm from canopy plexiglass, and his chest and shoulder are badly bruised.

I am not injured except for being covered with bird guts. Flying plexiglass chipped my visor.

The bird was a turkey vulture. It shattered the left quarter-panel of the wind screen, then went under the metal windscreen canopy bow and into the cockpit. The canopy frame is twisted and the canopy's left front quarter-panel is gone. Finally, the bird went down the engine intake, along with a lot plexiglass, causing extensive damage to the first six compressor stages of the engine.

All in all, we were lucky. Things could have been much worse. It was maybe only 15 minutes from the moment we hit the bird until we landed, but it seemed like two hours. Since this incident, I've changed my thinking about procedures.

Dial in the TACAN channel for your divert from the next check point before you get there. Look at your next divert heading at each checkpoint and memorize it.

Don't have your divert chart laying around. Put it under your kneeboard or some place where it is easy to get to but it cannot blow away.

When you have an emergency, there are a lot of things that you have to do at once and not always under the best of conditions. The better prepared you are, the better you'll be able to handle the emergency.

Lt. Neissel is an instructor with VT-7.

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His visor is half gone, and his face and helmet are covered with blood. Is it his or the bird's?

As an FRS instructor I have conducted blindfolded cockpit drills, one of the training wickets that a pilot must negotiate before flying the aircraft. Is it proper at the beginning of the training to reinforce the idea that switches, switch positions, knobs and handles can all be memorized and learned by touch? If so, then why are there so many MIR endorsements and hazard reports that conclude "pilot did not visually confirm the correct switch position," or "pilot inadvertently flipped the wrong switch because of its similarity and proximity to the right switch"?

What is the benefit of the blindfolded cockpit drill? To ensure that the emergency procedures can be followed if the cockpit suddenly fills with smoke. I've

# Would You Like a Blindfold?

By Capt. John P. Dehart, USMCR

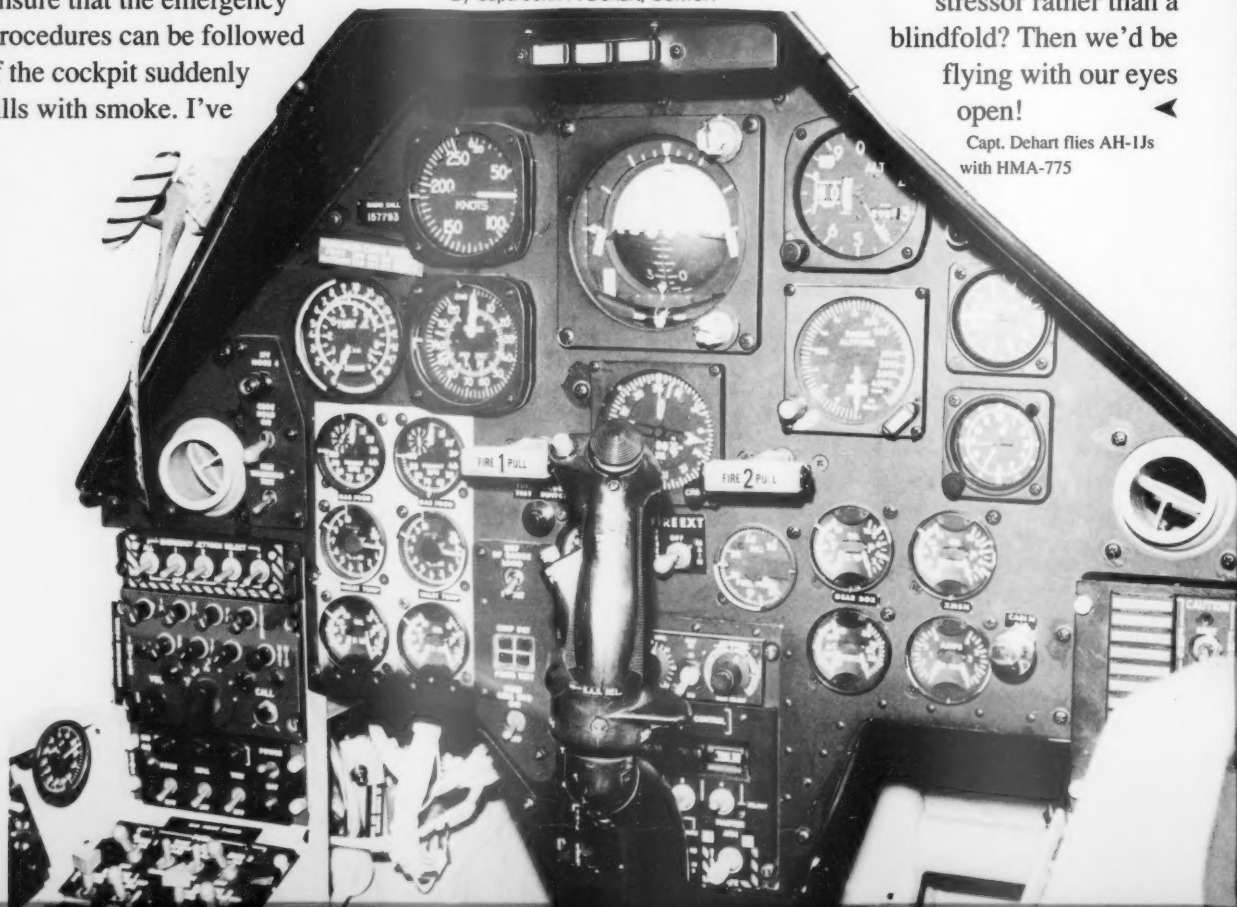
heard many sea stories, but I have yet to hear of any helicopter that has ever had the cockpit instantaneously fill with smoke.

Fast-movers can have condensation and other problems related to pressurized cockpits. But is the obscurity temporary or do we punch out every time? It's essential that we know what switches we are flipping.

We are sending mixed signals in training.

The cockpit drill seeks to ensure that the pilot is thoroughly familiar with the cockpit. That is a good thing to reinforce. However, wouldn't it be smarter to substitute a time limit—perhaps two seconds—as a stressor rather than a blindfold? Then we'd be flying with our eyes open!

Capt. Dehart flies AH-1Js with HMA-775



# LETTERS

## Bird Strikes

**NAS Dallas** – A C-9 had just taken off after an all-hands FOD walkdown. The aircraft ran into several gulls, killing all but one. This guy, whom we immediately named "Jonathan," had a broken wing and ended up in my office.

We handed him (or her?) over to the bird-care experts, who provided him with medical attention. We also gave him extensive briefings on our departure and recovery routes, course rules, and BASH program, and had him positively identify the corpses of his fellow seagulls for proper burials. (See the photo with my assistant ASO, ASC Kramer, explaining the finer points to Jon.)

We think a proactive BASH program should include briefing the birds just like the pilots. After all, the birds are subject to the same hazards we are.

Cdr. Mark Danielson  
ASO



ASC Kramer

## Re: LSOs and Cranials (April '92)

**FPO AA** – Lt. Maxwell voiced concern over LSOs not wearing cranials on the flight deck. I am my squadron's NATOPS officer and I share his concern for safety. As a wing-qualified LSO, I can help set the record straight.

The current CV NATOPS (paragraph 2.2, pages 2-1) requires flight personnel to wear cranials. However, CV NATOPS (figure 2-1, note 3, pages 2-3) exempts LSOs when they are waving aircraft. Cranials interfere with the LSOs' handsets, as well as limit critical and timely communications between LSOs. For hearing protection, most LSOs wear sound-attenuating earplugs.

Be assured that LSOs do follow regulations. While Lt. Maxwell's top priority is "keeping our people safe," the LSOs are directly tasked with "the safe and expeditious recovery of aircraft." Platform

experience has shown we can best achieve our goals without cranials.

Lt. G.C. Matt  
VS-31

## Re: June Cover (June '92)

**USS Saratoga (CV-60)** – The cover photo shows an A-6 taxiing onto the No. 1 cat on board *USS Enterprise* (CVN-65). A checker is still working on the aircraft.

In May, an airman from our squadron was in the same position, only his back was to the F/A-18 as he checked a weapon on station three. The Hornet was moving and the airman's right foot was caught and crushed under the jet's mainmount. He will probably be disabled for the rest of his life.

Why didn't you mention this hazard

when you ran the photo on this issue's cover. And why do troubleshooters keep working on moving aircraft?

ATAN David G. Sagers  
VFA-81 IWT Shop

*Good call, and an excellent point. However, the individual by the A-6 is a final checker, not a troubleshooter. Final checkers are allowed to work on a moving aircraft in certain circumstances; troubleshooters aren't. The Air Department Standard Operating Procedures (COMNAVAIRPAC/LANTINST 3100.4A) also says that "personnel shall not transit under or otherwise be beneath a moving aircraft, except as absolutely necessary to ensure timely launching."*

*Thanks for being alert and conscientious enough to raise the question. – Ed.*

ANYWAY YOU SPELL IT.  
SAFETY WINS THE GAME.

